



2004 RECYCLING MARKET DEVELOPMENT REPORT



Nevada Recycles
Nevada Division of Environmental Protection

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**Nevada Department Of Conservation And Natural Resources
Division Of Environmental Protection
Bureau Of Waste Management**

1.1 Introduction

This is the eleventh annual recycling market development report submitted to the director of the legislative counsel bureau by NDEP as mandated by NRS 444.587. In the 2003 legislative session, NDEP proposed Assembly Bill 447 that addressed a range of issues NDEP believes are hindering the strength and growth of recycling in Nevada. Among these proposed legislative changes was the repeal of NRS 444.587. NDEP has long suggested that a more appropriate agency be designated to fulfill the requirements of NRS 444.587, failing such a re-designation it would be best to rescind the statute in its entirety allowing NDEP to focus limited resources on recycling issues more pertinent to its core mission. While AB 447 died in committee, NDEP maintains its position regarding the value of most of the amendments proposed in that bill including the repeal of NRS 444.587.

NDEP would support a bill that designates a more appropriate agency to perform the mandates of NRS 444.587.

This report also recommends initiatives to encourage businesses that collect recyclable materials. A number of previous market development reports have stressed the importance of attracting manufacturers that use recyclables in their feedstocks. This would be a valuable asset to the growth of markets for recyclables; however, Nevada's arid environment and low population density are often significant barriers to such enterprises. Therefore; as in the 2003 market development report, NDEP believes that the most effective strategy may be to focus efforts on encouraging businesses that collect and process recyclables on their way to re-manufacture.

1.2 Repeal of NRS 444.587

NRS 444.587 requires this market development report to include: 1) a general description of markets for recycled materials in the state; 2) any recommendations relating to increasing the demand for recycled materials and developing markets for recycled materials; 3) the development of local and state policies which encourage the purchasing of products manufactured from recycled materials; and 4) financial assistance and incentives to encourage the use of recycled materials in the state.

NRS 444.587 was promulgated in the 66th Legislature in Assembly Bill 361 and requires NDEP to develop markets for recyclables and provide assistance to recyclers in finding markets for their materials. Other market development initiatives AB 361 addressed include procurement of recycled-content products by local governments and procurement of recycled-content paper and other goods by public schools.

While these issues are very important to successful recycling programs, AB 361 did not provide sufficient resources to adequately address the market development mandates and the language used in the adopted statutes placed unrealistic responsibilities on NDEP.

An example of this is found in NRS 444.587(1): *The division of environmental protection of the state department of conservation and natural resources shall: (a) Develop markets in this state for products made from recycled materials...* (underline added for emphasis).

As has been stated in each of the previous market development reports, market development is outside the purview and expertise of NDEP staff - an effective program would both exceed NDEP resources and fall outside of its core mission. Such an issue would be more appropriately addressed by an economic development agency. It is appropriate to renew such emphasis on new business development as the state seeks ways to expand its tax base beyond gaming.

NDEP does try to encourage the markets for recycling. In 1995 with assistance from a grant by USEPA, the Nevada Commission on Economic Development (NCED) hired a Recycling Economic Development Advocate (REDA). NDEP provided funding to continue this contract in 1996. Unfortunately the contract did not produce significant results. NDEP also provided a contract to the NCED in 1997 to develop and print a guide to recycling services and products available in the state. This guide was published in February 1998 and made widely available to interested parties.

NDEP plans to continue initiatives in the future in fulfillment of the very broad mandates under NRS 444A.110 to provide public education and technical assistance to Nevadans on recycling and resource conservation. Such initiatives can also help to fulfill the mandate to develop and encourage markets for recycling.

1.3 Recycled-Content Product Procurement

The universal symbol of three arrows following each other in a circle is emblematic of recycling for several reasons. It is representative of the three elements necessary for successful recycling. These are collection of recyclables, the remanufacturing of the recyclables into new products, and the demand for those products through their procurement. For this reason recycling professionals often speak of the importance of "Closing the Loop", meaning to select recycled-content products over those made of virgin materials. NDEP has been working with State Purchasing to try to increase the use of recycled-content products by the state, and State Purchasing has recently implemented several initiatives to achieve this end and "green" state procurement in general.

Assembly Bill 320 passed in 1991 gave the chief of the state purchasing division specific responsibilities to consider the purchase of recycled-content goods without discrimination, if they are of the same quality as the same goods made of virgin materials. AB 320 also directed the state purchasing division to maximize the procurement of recycled-content products and to give preference to those products that are of equal quality and price to products made of virgin materials. This legislation defined similar preferences to be given specifically for the purchase of recycled-content paper.

In March 2002 a joint memorandum was issued by the state purchasing division and NDEP encouraging all state agencies to consider the purchase of recycled-content paper and other environmentally-friendly products and services. State purchasing conducted a voluntary survey on the desire and use of recycled-content paper that was attached to the memo. NDEP provided a Fact Sheet expounding the benefits of using recycled-content paper also attached with the memo.

There were 59 respondents to the survey and the overwhelming majority (57 to 2) indicated they would buy recycled-content paper if the quality were equal to virgin stock. However; only 24 respondents indicated that they would be willing to pay more for such paper. Extensive use of paper containing 30% post-consumer fibers by agencies of the Department of Conservation and Natural Resources (DCNR) using a number of different makes and models of copy machines and printers indicates it is of equal quality and performance to 100% virgin fiber paper.

Unfortunately at current pricing levels the 30% recycled-content paper costs approximately 10% more than virgin paper, and state agencies are not buying it. NDEP understands that State Purchasing has been in communication with Utah regarding this issue. The State of Utah uses a reverse auction where paper vendors try to low bid their products to win the state's business. State Purchasing plans to partner with Utah on an upcoming reverse auction on-line in 2004 to bring down the cost of recycled-content paper. Hopefully, this strategy will bring the cost of recycled-content paper in line with virgin fiber paper.

Table 1-1 on the following page summarizes state purchasing orders of 8½" x 11" and 8½" x 14" copy paper through 2nd Quarter SFY '04. It is important to note that a number of non-state public agencies utilize this system and the paper orders of these public agencies are included in these totals also.

In SFY '02 public agencies ordered 20,851 cases of 8½" x 11" virgin stock paper from the Reno and Las Vegas warehouses compared to 49 cases of the 30% recycled-content paper. SFY '03 orders were 36,375 cases of virgin stock as compared to 508 cases of recycled-content paper. Near the halfway point in SFY '04, 19,869 cases of virgin paper have been ordered and 251 cases of recycled-content paper. These data clearly demonstrate that AB 320's intent to "green" state government and encourage the markets for recycled paper is not being satisfied.

Very nearly all the purchases of recycled-content paper were made by agencies in the DCNR or by State Purchasing. In May 2002, the director of DCNR sent a memo to all DCNR administrators encouraging them to use recycled-content paper. Paper procurement data from the Reno and Las Vegas warehouses indicate this had some effect, although a significant quantity of virgin paper is still purchased by DCNR agencies. This is most likely due to the cost differential between virgin and recycled-content paper.

Table 1-1 Copy Paper Orders through Nevada State Purchasing Warehouse¹

	SFY 2001		SFY 2002		SFY 2003		SFY 2004 ²	
	Las Vegas	Reno	Las Vegas	Reno	Las Vegas	Reno	Las Vegas	Reno
4135 – 8 ½ X 11 Letter	9,889 cases	24,082 cases	5,790 cases	15,061 cases	10,634 cases	25,741 cases	5,647 cases	14,222 cases
4136 – Recycled 8 ½ X 11 Letter			0	49 cases	27 cases	481 cases	10 cases	241 cases
4143 – 8 ½ X 14 Legal	3,284 reams	8,669 reams	1,715 reams	4,155 reams	1,862 reams	7,839 reams	519 reams	3,214 reams

1) Values include all public agencies participating through the state purchasing division warehouse.

2) Data through December 2003.

State Purchasing has also added an environmentally-preferable procurement (EPP) element to their contract monitor certification course. A state purchasing officer with knowledge of EPP gives an approximate 30-minute presentation on what EPP is and how it can improve the bottom line for a state agency. Beyond simply purchasing goods made of recycled materials, EPP includes many money-saving concepts such as buying goods with the highest energy efficiency and the least amount of toxic constituents. Toxic materials can greatly increase the cost of handling material, managing them during use, and properly disposing of them when they become waste.

NDEP strongly applauds recent actions taken by State Purchasing and believes that state government needs to continue to support legislation adopted in AB 320 and the other preferential purchasing initiatives. Although it has been over ten years since its passage, little has been accomplished by Nevada state government or most of the municipalities on this issue.

One outstanding exception to this trend is Washoe County. With leadership coming from the Washoe County District Health Department, Washoe County has implemented an environmentally-preferable procurement policy that has gained national recognition. In close partnership with EPA's WasteWise program, Washoe County has instituted a number of waste reduction and recycling initiatives including a very progressive procurement policy.

Washoe County purchasing department has implemented a number of practices which save money and promote recycling. For years, all white copy paper purchased by Washoe County has been 30% post-consumer recycled content. Currently, many miscellaneous paper office supplies used by Washoe County are made of recycled-content materials as well. Washoe County implemented a carpet squares program that eliminates the use of broadloom carpeting throughout Washoe County facilities and in all new construction. Only worn and damaged carpet squares are replaced, and they are refurbished up to three times. This program has enabled the county to carpet many facilities that would otherwise not be carpeted, improving ergonomics and the R-value insulation rating of the carpeted buildings. Washoe County equipment shops use re-refined oil for their equipment needs. The county equipment shops collect and sell used motor oil and hydraulic fluids back to the oil recycler realizing significant cost savings. The county also collects used tire casings discarded by the Washoe County School District from school buses. These casings are then used to make re-treads used on county trucks. Washoe County purchasing department estimates \$500,000 was saved in 2002 as a result of this practice. Finally, all trash can liners used by the county are made of recycled-content materials.

Washoe County proactively seeks new opportunities for environmentally-preferable procurement. The board of commissioners of Washoe County has officially adopted a "buy-recycled" policy that has moved all these initiatives forward. DCNR has demonstrated that getting the "OK " from the top to order recycled-content goods strongly influences these purchases. In order to realize the cost efficiencies of volume, public agencies need to demand recycled-content paper. The state legislature has given public agencies the tools they need to institute such programs and policies and now what is needed is the decision to do so.

1.4 New Business Development

NRS 444.587 directs NDEP to consider financial assistance and incentives to encourage businesses that use recycled materials to locate in the state and to provide any recommendations on such in this report. As discussed above, NDEP with help from EPA did fund the NCED to recruit and promote Nevada as a state in which to locate recycling and re-manufacturing businesses. Although these efforts have largely been unsuccessful, there have been some successes with the opening of new businesses that collect recycled materials or use recycled materials in their feedstocks. Most of these new businesses are involved in the collection and processing of electronic wastes, an issue that has gained much attention nationally.

When NDEP has had the opportunity to question representatives of these companies as to what attracted them to Nevada, several factors are often cited in common. Location of Nevada to major West Coast markets and accessibility to transport to those markets is a very frequent reason given. Favorable real estate and labor markets, and a business-friendly tax code and government environment are other factors which attract these companies to Nevada. These attributes are important selling points to bringing new recycling businesses to the state and are identified in the following examples.

As discussed in the 2003 market development report, the Trex™ Company, Inc. opened a 160,000 square foot facility in Fernley in 1999. Trex™ manufactures a wood/polymer lumber that is used primarily in deck construction. Recently, NDEP has learned of several new electronic waste recyclers that are opening facilities in Nevada. The companies are Redemtech, Inc. of Columbus, OH and R3 Mobile, Inc. of Henderson, NV. A third company, Asset Waste Management and Recycling, Inc. of Fort Oglethorpe, GA recently contacted NDEP expressing an interest in locating a facility in Las Vegas.

In a press release by Trex™ from 1999, *Doug Hart, Vice President of Sales and Marketing of Ore Pac Building Products, a Trex™ distributor, commented, "Having a Trex™ plant on the West Coast provides major benefits in both service and reduced freight and handling costs. We can service the entire West Coast out of Fernley by truck in under 48 hours whereas rail cars from the east have been taking 4-8 weeks to reach us. The Trex™ product out of the Fernley plant looks great. It is the same high quality that we have become accustomed to receiving from Trex's™ Winchester plant."*

Redemtech, Inc. is a computer and electronic waste recycler based in Ohio. They provide businesses and other organizations with electronic waste management and recycling services including the destruction of proprietary data from computer hard drives, the return of reuseable equipment back to the client, and the management and recycling of unuseable equipment. Redemtech is planning to open a 65,000 square foot facility in Sparks that will be capable of processing over 250,000 pieces of electronics per year.

From a press release by the company announcing this event, *Redemtech's president and founder, Bob Houghton, described the importance of the new location. "Reno will significantly benefit businesses with West Coast operations. Costs to ship IT assets to Redemtech for processing will be greatly reduced. Equally, freight associated with final disposition - for redeployment into the client organization, donation to charity, resale or other- will also be reduced, thereby increasing the residual value of the asset."*

NDEP recycling program staff recently toured the new R3 Mobile facility in Henderson, NV. The company currently occupies 12,000 square feet of warehouse and "clean room" space where they accept cell phones for repair, refurbishment, and recycling. The company accepts discarded cell phones from businesses, organizations, and individuals and then tests and refurbishes the phones as appropriate. Cell phones that cannot be repaired are disassembled and processed for recycling. Repaired and refurbished phones can be returned to the client or re-sold in the marketplace. Company president Joseph Fernandez de Castro

stated that many of the same factors influenced his decision to locate in Nevada as were recognized by Trex™ and Redemtech. In addition, Mr. Fernandez indicated that locating his business in Henderson was greatly motivated by it being located in a Foreign Trade Zone. He explained that R3 Mobile does a significant amount of trade exporting refurbished phones to foreign markets, and the Trade Zone designation was of great benefit.

In spite of the success stories, a number of factors have hindered Nevada from attracting a significant number of re-manufacturing businesses or businesses that use recyclables as a feedstock. Water supply and population-base demands are frequently barriers. By comparison, several positive factors in Nevada can help to encourage recycling service businesses to locate here. These factors include a burgeoning population in urban regions of the state resulting in an increasing potential supply of material available for collection. With a dependable supply of quality material, the economies of having to ship the collected recyclables to market are improved.

NDEP believes the most beneficial focus for recycling market development in Nevada would be on recycling service providers and processors. Such businesses include document destruction and paper fiber recyclers, composters, auto wreckers and scrap yards, automotive oil and anti-freeze recyclers, rendering and grease recyclers, toner cartridge re-manufacturers, and others.

Curbside residential collection programs in Carson City, Clark, and Washoe counties have produced an on-going supply of recyclable materials, but these materials are collected and marketed by the garbage collection providers in those jurisdictions and are largely unavailable to other Nevada recyclers. A potential source of recyclables outside private residences are offices, commercial facilities, and businesses. As established at the Clark County recycling forum in 2001, there is often a lack of information available to businesses regarding the availability of recycling service providers.

NDEP received a \$35,000 grant from USEPA in October 2003 to study and identify successful paper recycling programs in Las Vegas. The intent of this study is to produce educational materials for businesses in Clark County that will teach them about the environmental and strategic benefits to recycling and help them begin recycling programs. NDEP's 2003 recycling bill draft proposed that in counties with populations of 100,000 or greater, business license applications should be accompanied by information on opportunities for waste reduction and recycling. NDEP also proposed that the affected counties should provide consultation regarding waste reduction and recycling as requested by local businesses. The intent of such public service is to encourage business recycling and reduce disposal while helping to create markets for recycling services. NDEP hopes that the educational materials produced through the USEPA grant will be used by Clark County as a convenient way to promote business recycling.

The impact of such commercial recycling can be significant. NDEP has communication with a large order processing and distribution center in Las Vegas that has related quantitative data regarding their in-house recycling program. The company previously recycled its waste cardboard only and sent approximately 100 tons of waste per month to landfill. At that time, the company was recycling about 25% of its total generated solid waste. In partnership with its cardboard recycling provider, the company gradually added other waste streams to the recycling bins and in December 2001 implemented an official waste management program with the goal of removing all recyclables from the waste stream.

In 2002, the company increased its recycling rate to over 60%. The result was a savings in waste disposal costs of over \$23,000, or approximately 30%, with no additional cost incurred for the expanded recycling services. Company staff have indicated that part of the success of the program stems from timely communication of the program's results with employees. The positive feedback helps keep up performance of the program while increasing employee morale.

Through good and poor economic times, a number of recycling processing businesses in Nevada have proven viable. The issue of whether to encourage this business sector should not be based on if they can prosper without local demand for their material, but how to assure this business sector remains an attractive and productive part of the local economy. This responsibility not only lies with economic development agencies looking for incentives to attract such businesses, but also with policymakers to assure that regulatory burdens do not place needless or unfair barriers before them.

1.5 Market Development Summary

In this eleventh annual report, NDEP has remained close to many previous recommendations. Market development for recyclables remains a difficult issue, but the emphasis needs to remain with procurement of recycled-content goods and new recycling business growth. NDEP is also recommending that the statute mandating recycling market development be repealed until more appropriate legislation can be passed.

Summary of recommendations:

- 1) Repeal NRS 444.587 and seek drafting of new legislation that will place recycling market development responsibilities on an appropriate agency designated for economic development. Such legislation needs to provide adequate resources and authority to fulfill its mandates. NDEP will continue to provide information and technical support of market development issues as

necessary.

2) Emphasize recycled-content procurement. Current statute and regulation are sufficient to enable end-users and purchasing agents to select for recycled-content products. There needs to be more education by the appropriate agencies on the quality and benefits of buying recycled. Often times, environmentally-preferable procurement results in substantial savings as is demonstrated in Nevada by the Washoe County model. Communication from senior administration affirming the benefits and desirability of having staff take environmentally-preferable actions is essential.

3) Recognize the importance of recycling service and processing businesses to the growth and viability of solid waste recycling in Nevada. Continued population growth assures an increasing source of recyclables. Municipal and state economic development agencies should be made aware of the markets and opportunities being created in this business sector. Decision makers and regulators must maintain fair access to markets and equivalent operating standards for recyclers and non-recyclers to eliminate barriers to business growth.

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